

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace prior versions and listings of claims in the application:

Claim 12 has been amended as follows: Underlines indicate insertions and ~~strikethrough~~ indicate deletions.

Listing of claims:

1. – 6. (Cancelled)

7. (Previously presented) A method for enhancing expansion of a stem cell population, the method comprising directly delivering in a stem cell population an effective amount of a stem cell expansion factor which comprises a HOXB4 protein and a NH₂-terminal protein transduction domain (PTD) from a transactivating protein (TAT), whereby said stem cell expansion factor is able to cross a cell membrane and is substantially active in said stem cell population, thereby enhancing expansion of said stem cell population.

8. (Cancelled)

9. (Previously presented) The method of claim 7, wherein the amino acid sequence is delivered in said stem cell population *in vivo*.

10. –11. (Cancelled)

12. (Currently amended) The method of claim 449, wherein said stem cell is a hematopoietic stem cell.

13. (Previously presented) The method of claim 12, wherein said hematopoietic stem cell is a human hematopoietic stem cell.

14. – 17. (Cancelled)

18. (Previously presented) A method for restoring a patient hematopoietic capability, said method comprising directly delivering in a hematopoietic stem cell population of a patient a stem cell expansion factor which comprises a HOXB4 protein and a NH₂-terminal protein transduction domain (PTD) from a transactivating protein (TAT), wherein said stem cell expansion factor is able to cross a cell membrane and is substantially active in said hematopoietic stem cell, thereby enhancing expansion of said hematopoietic stem cell population and restoring hematopoietic capability of said patient.

19. (Cancelled)

20. (Previously presented) The method of claim 18, wherein said amino acid sequence is delivered in said hematopoietic stem cell *in vivo*.

21. (Cancelled)

22. (Cancelled)

23. (Previously presented) The method of claim 18, wherein said hematopoietic stem cell is a human hematopoietic stem cell.

24. – 25. (Cancelled)

26. (Previously presented) The method of claim 7, wherein the amino acid sequence is delivered in said stem cell population *in vitro*.

27. (Previously presented) The method of claim 18, wherein said amino acid sequence is delivered in said hematopoietic stem cell *in vitro*.